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9 John Pearson; Stephanie Pearson,
0 Plaintiffs,
1 vs.
2 Wright Medical Technology, Inc.,
3 Defendant.
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7 The court has before it defendant's motion for summary judgment.
8 the testimony of Lester Hendrickson, Ph.D., in support of his motion.
9 defendant's reply (doc. 50).
10
11 This is a products liability action involving a hip replacement
12 system, a prosthetic hip implant manufactured by Wright Medical
13 Technology, Inc. On April 9, 2007, plaintiff underwent hip
14 surgery, during which the PROFEMUR® prosthetic hip
15 implant is comprised of three separate components: the femoral head,
16 the modular neck, and the acetabular cup. The femoral head is the
17 component at issue in this litigation, the modular neck is the component
18 and is designed to be inserted directly into the acetabular cup.
19 modular neck of plaintiff's PROFEMUR® hip implant.

[illegible]

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1 Plaintiffs filed this action against Wright Medical Technology, alleging that the hip implant
2 was defectively designed and/or manufactured.

3 A manufacturer is strictly liable for injuries caused by use of any product that was in
4 a “defective condition and unreasonably dangerous.” Dart v. Wiebe Mfg., Inc., 147 Ariz.
5 242, 244, 709 P.2d 876, 878 (1985) (quoting Restatement (Second) of Torts § 402A (1965)).
6 To establish a prima facie case of strict products liability, a plaintiff must show that, when
7 the product left the defendant’s control, it was in a defective condition that made it
8 unreasonably dangerous, and that the defect was the proximate cause of the plaintiff’s
9 injuries. Jimenez v. Sears, Roebuck & Co., 183 Ariz. 399, 402, 904 P.2d 861, 864 (1995).

10 Defendant now moves to strike the testimony of plaintiffs’ expert witness, metallurgist
11 Lester Hendrickson, Ph.D., contending that his opinions are neither relevant nor reliable. It
12 also seeks summary judgment, arguing that without Dr. Hendrickson’s testimony, plaintiffs
13 cannot establish their claim.

14 The Federal Rules of Evidence allow expert testimony that will assist a trier of fact
15 in understanding the evidence or in determining a fact in issue, so long as “(1) the testimony
16 is based upon sufficient facts or data, (2) the testimony is the product of reliable principles
17 and methods, and (3) the witness has applied the principles and methods reliably to the facts
18 of the case.” Fed. R. Evid. 702. Under the framework developed in Daubert v. Merrell Dow
19 Pharm., Inc., 509 U.S. 579, 113 S. Ct. 2786 (1993), trial courts must serve as gatekeepers to
20 ensure that proffered testimony is both relevant and reliable. Id. at 597, 113 S. Ct. at 2799.
21 The test of reliability is “flexible.” Id. at 594, 113 S. Ct. at 2797. We may consider factors
22 such as (a) whether the theory or technique can or has been tested; (b) whether it has been
23 subjected to peer review and publication; (c) the known or potential rate of error; (d) the
24 existence and maintenance of standards controlling the technique’s operation; and (d) its
25 general acceptance within the scientific community. Id. at 593-94, 113 S. Ct. at 2796-97.
26 The role of the courts in reviewing proposed expert testimony is “to make certain that an
27 expert, whether basing testimony upon professional studies or personal experience, employs
28 in the courtroom the same level of intellectual rigor that characterizes the practice of an

expert in the relevant field.” Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152, 119 S. Ct. 1167, 1176 (1999). “Our task, then, is to analyze not what the experts say, but what basis they have for saying it.” Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311, 1316 (9th Cir. 1995) (Daubert II).

Defendant first argues that Dr. Hendrickson’s expert testimony should be excluded as irrelevant and unreliable because it was based on his incorrect assumption that Mr. Pearson received a traditional, non-modular hip implant during his April 9, 2007 surgery, when in fact he had received a modular device, consisting of three separate components. Defendant believes that this distinction is critical because, by assuming that the implant was a single-piece device, Dr. Hendrickson failed to consider the possibility that the implant cracked due to “fretting.”

Fretting is a metallurgical phenomenon that occurs at metal-to-metal contact areas placed under load stress and subjected to motion. DSOF ¶ 16. During surgery, the PROFEMUR® neck is inserted into the femoral stem, resulting in a metal-to-metal interface. The surgically implanted device is then repeatedly subjected to force and movement when the patient ambulates. According to defendant, the development and progression of fretting is affected by patient weight and activity level, surgical technique, patient bone structure, and biochemical issues, but is unrelated to the manufacturing process. Motion at 6. Defendant argues that because Dr. Hendrickson believed that Mr. Pearson received a single-piece implant with no metal-to-metal contact, he incorrectly concluded that fretting was not possible. Defendant contends that Dr. Hendrickson’s opinion is therefore irrelevant and inadmissible.

Dr. Hendrickson opined that the subject implant failed due to a premature fatigue fracture resulting from a manufacturing defect. He observed through visual inspection and the use of a scanning electron microscope (“SEM”) numerous microcracks on the surface of the implant stem. He stated that such surface cracks act as stress concentrations and crack initiation sites, and are known to cause fatigue fractures. He opined that these microcracks “could only be present due to a manufacturing defect,” PSOF, ex. 1, ¶ 10, and that “the first

1 phase of the fracture process is effectively manufactured into the stem.” DSOF, ex. G at 5.

2 Dr. Hendrickson acknowledged that he incorrectly identified the model of the
3 defective prosthetic, but stated that he would have reached the same conclusions even if he
4 had understood that the prosthesis was a modular implant with metal-to-metal contact. He
5 explained that he rejected fretting as the cause of the failed prosthetic because none of the
6 indices of fretting, including linear wear markings, debris, or pitting, was observed during
7 his inspection.

8 Defendant presents the rebuttal report of expert Brad James, Ph.D., who opined that
9 the subject implant exhibited no evidence of manufacturing defects. His report includes
10 photographs of the surface of the cracked implant neck, purportedly showing debris, pitting
11 and linear wear, thereby establishing that fretting had occurred. This conflicting evidence,
12 however, demonstrates that a genuine issue of material fact remains for trial. It does not
13 establish as a matter of law that plaintiffs’ claim is without merit.

14 Defendant also contends that Dr. Hendrickson’s opinions are unreliable because they
15 are not based on any scientifically valid methodology. Defendant argues that Dr.
16 Hendrickson did not review any manufacturing or design history records, or performance
17 specifications, and contends that he knows nothing about the manufacturing process or the
18 condition of the device when it left defendant’s control.

19 Evidence is admissible under Daubert if there is an accepted scientific method for
20 making a reliable measurement, even if the evidentiary significance of the measurement can
21 be disputed. Daubert, 509 U.S. at 595, 113 S. Ct. at 2797 (“The focus, of course, must be
22 solely on principles and methodology, not on the conclusions that they generate.”).

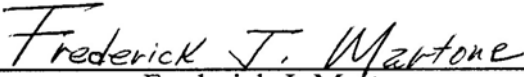
23 Although defendant criticizes Dr. Hendrickson’s methodology as not demonstrating
24 scientific reliability, both parties’ experts employed the same techniques in evaluating the
25 failed implant. Both experts conducted a non-destructive analysis using visual and scanning
26 electron microscope (SEM)-based inspection, and energy dispersive spectroscopy. Dr. James
27 concluded that “[n]o defects were observed on the fracture surface that could have contributed
28 to fatigue crack initiation and growth,” and that “[e]xamination of the outside surface of the

1 neck showed clear evidence of fretting.” DSOF, ex. K at 6. Dr. Hendrickson opined, on the
2 other hand, that he observed microcracks near the fracture origin and concluded, based on his
3 educational background and experience of more than thirty-five years analyzing failed
4 consumer products, including artificial hips and prosthetic implants, that these microcracks
5 are evidence of a manufacturing defect. DSOF, ex. G at 5.

6 We are satisfied that Dr. Hendrickson’s opinion, while certainly subject to challenge,
7 is based on valid principles and is sufficiently probative to assist the trier of fact in evaluating
8 the issues presented in this case.

9 Accordingly, **IT IS ORDERED DENYING** defendant’s motion for summary
10 judgment and **DENYING** defendant’s motion to strike expert testimony (doc. 44).

11 DATED this 22nd day of July, 2010.

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 Frederick J. Martone
15 United States District Judge
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